

## Claims

We claim:

- 5      1.      A method comprising the steps of:
  - (a) identifying a plurality of data fields;
  - (b) transmitting a data symbol comprising a first set of data;
  - (c) maintaining a data field from which the data symbol was transmitted;
  - (d) receiving an acknowledgement symbol comprising a second set of data;
  - (e) comparing the first set of data to the second set of data; and
  - (f) if the first set of data is equivalent to the second set of data, repeating steps b-f until data transmission is complete; otherwise, temporarily suspending data transmission.
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2.      The method of claim 1 further comprising the step of maintaining the data field for a predetermined period of time when power is removed and subsequently re-applied.
3.      The method of claim 1 further comprising the step of defaulting to a first data field when power is removed and subsequently re-applied.
4.      The method of claim 1 further comprising the steps of, if the first set of data is not equivalent to the second set of data:
  - receiving a request for devices temporarily suspended in a given data field to resume data transmission;
  - if the data field that was maintained is equivalent to the given data field identified in the request, repeating steps b-f, starting with a first symbol in the data field that was maintained; and

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if the data field is not equivalent to the given data field identified in the request, continuing to temporarily suspend data transmission.

5. The method of claim 1 further comprising the step of becoming inactive when data transmission is complete.
10. The method of claim 1 further comprising the steps of:  
initializing to a first data field upon power-up;  
receiving a request for devices in a given data field to transmit data; and  
becoming active only if the first data field is equivalent to the given data field identified in the request.
15. A method comprising the steps of:
  - (a) transmitting a request to activate a set of tags in a first state;
  - (b) receiving a set of data symbols;
  - (c) in response to receiving the set of data symbols, transmitting an acknowledgement symbol;
  - (d) continuing to transmit an acknowledgement symbol in response to each set of data symbols received, and when a predetermined number of sets of data symbols is received, repeating steps a-d; and
  - (e) when a set of data symbols is not received in step b, transmitting a second request to activate a set of tags in a second state, wherein the first state is different from the second state.
25. 8. The method of claim 7 further comprising the step of, after the step of transmitting the second request, looping through steps b-e.
30. 9. A method comprising the steps of:  
transmitting a request to activate a set of tags in a first state;  
receiving a set of data symbols;

in response to receiving the set of data symbols, transmitting an acknowledgement symbol;

continuing to transmit an acknowledgement symbol in response to each subsequent set of data symbols received;

5 transmitting at least a second request to activate a set of tags in a second state, wherein the first state is different from the second state.

10. The method of claim 9 further comprising the step of transmitting an excitation signal.

10 11. The method of claim 9 further comprising the step of copying at least a portion of data represented by each acknowledgement symbol into a storage device.

15 12. The method of claim 9 further comprising the steps of:  
copying at least a portion of data represented by each acknowledgement symbol into a first storage device; and  
when the first storage device contains a predetermined amount of data,  
copying the predetermined amount of data into a first location of a second storage  
20 device.

13. The method of claim 10 further comprising the step of clearing at least a portion of the first storage device upon transmitting a request to activate a group of radio frequency identification tags in a given state.

25 14. The method of claim 10 further comprising the step of copying at least a portion of data represented by each acknowledgement symbol transmitted after the request into the portion of the first storage device that was cleared.

30 15. A method comprising the steps of:

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- (a) identifying a plurality of data fields;
- (b) transmitting a request;
- (c) transmitting a data symbol;
- (d) maintaining a data field from which the data symbol was transmitted; and
- (e) if the data symbol is acknowledged, repeating steps c-e; otherwise, returning to a beginning of a data field and repeating steps b-e.

10        16. A method comprising the steps of:

- (a) identifying a plurality of data fields, each data field having a set of field symbols and each field symbol having a first set of data;
- (b) receiving a data symbol comprising a second set of data;
- (c) identifying a field symbol corresponding to the data symbol in a location;
- 15        (d) if the first set of data of the field symbol is equivalent to the second set of data of the data symbol, transmitting an acknowledgement symbol and repeating steps b-d; otherwise, temporarily suspending data transmission and returning to a beginning of the data field containing the field symbol corresponding to the data symbol in the location.

20        17. A method comprising the steps of:

  - (a) identifying a plurality of data fields;
  - (b) transmitting a request;
  - (c) transmitting a data symbol corresponding to a position in a data field;
  - (d) maintaining the data field from which the data symbol was transmitted;
  - (e) if the data symbol is acknowledged, repeating steps c-f; otherwise, transmitting a second data symbol corresponding to the position in the data field;

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(f) if the second data symbol is acknowledged, repeating steps c-f;  
otherwise, returning to a beginning of the data field and repeating steps b-f.

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